

Comparing the Perioperative and Oncological Outcomes of Open Versus Minimally Invasive Inguinal Lymphadenectomy in Penile Cancer: A Systematic Review and Meta-Analysis

Yu Guang Tan ^{1,*}, Khi Yung Fong ¹, Nathanael Kai-Jun Goh ¹, Alvin YM Lee ¹, Kae Jack Tay ¹, John SP Yuen ¹, Michael R. Abern ² and Kenneth Chen ¹

Table S1. Full search phrases for the respective databases.

PubMed	869 articles
(penis OR penile) AND (cancer OR carcinoma) AND (lymph node dissection OR lymphadenectomy) NOT (systematic[sb] OR Editorial[pt] OR Comment[pt] OR Meta-Analysis[pt] OR Case Reports[pt] OR Review[pt])	
Embase	468 articles
(penis OR penile) AND (cancer OR carcinoma) AND (lymph AND node AND dissection OR lymphadenectomy) AND (laparoscopic OR robot OR open OR endoscopic OR endoscopy OR veil OR 'minimally invasive surgery' OR mis) NOT ([animals]/lim NOT [humans]/lim) NOT ([editorial]/lim OR [erratum]/lim OR [letter]/lim OR [note]/lim OR [review]/lim OR [short survey]/lim)	
Scopus	60 articles
TITLE-ABS-KEY ((penis OR penile) AND (cancer OR carcinoma) AND (lymph node dissection OR lymphadenectomy)) AND NOT (SRCTYPE (b) OR SRCTYPE (k) OR SRCTYPE (p) OR SRCTYPE (r) OR SRCTYPE (d) OR DOCTYPE (ab) OR DOCTYPE (bk) OR DOCTYPE (ch) OR DOCTYPE (bz) OR DOCTYPE (cp) OR DOCTYPE (cr) OR DOCTYPE (ed) OR DOCTYPE (er) OR DOCTYPE (le) OR DOCTYPE (no) OR DOCTYPE (pr) OR DOCTYPE (rp) OR DOCTYPE (re) OR DOCTYPE (sh))	

Table S2. Risk of bias assessed using Newcastle-Ottawa Scale.

	Selection	Comparability	Outcome	Total quality score
Bada 2023 [1]	***	*	**	6
Brasetti 2024 [2]	***	*	**	6
Falcone 2024 [3]	****	**	**	8
Fankhauser 2022 [4]	***	*	**	6
Kumar 2017 [5]	***	*	*	5
Ma 2022 [6]	***	*	**	6
Ozambela 2024 [7]	***	*	**	6
Schwentner 2013 [8]	**	*	**	5
Shao 2022 [9]	***	*	**	6
Singh 2018 [10]	***	*	**	6
Thyavihally 2021 [11]	***	*	**	6
Tobias-Machado 2007 [12]	***	**	**	7
Wang 2017 [13]	***	*	**	6
Yadav 2018 [14]	**	*	**	5
Ye 2018 [15]	***	*	**	6
Yu 2019 [16]	**	*	**	5

Table S3. Bayesian network meta-analysis of operative time in minutes.

OIL		
-11 (-30; 8)	VEIL	
-74 (-110; -38)	-63 (-104; -22)	RAIL

OIL, open inguinal lymphadenectomy, VEIL, video-endoscopic inguinal lymphadenectomy, RAIL, robot-assisted video-endoscopic inguinal lymphadenectomy.

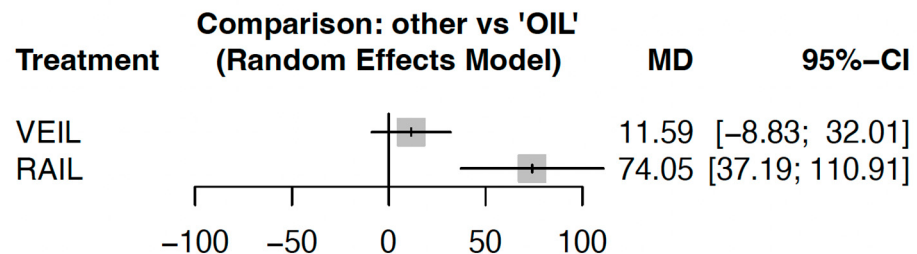


Figure S1. Forest plot of Bayesian network meta-analysis of operative time.

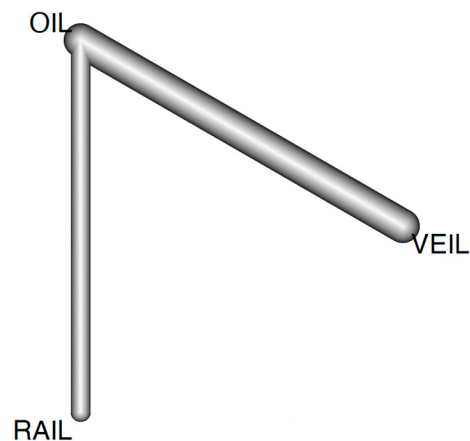


Figure S2. Network graph of Bayesian network meta-analysis of operative time.

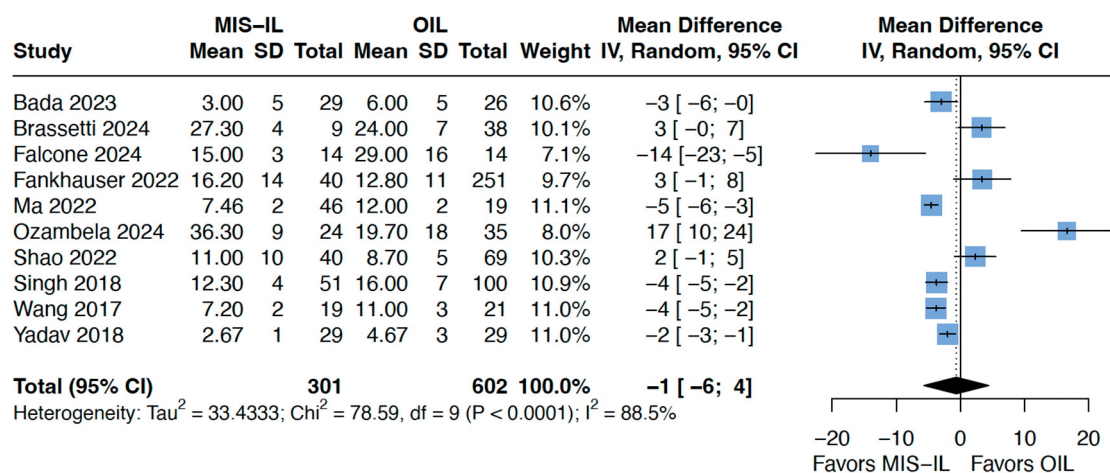


Figure S3. Forest plot comparing O-ILND versus MIS-ILND for time to drain removal [1-4,6,7,9,10,13,14].

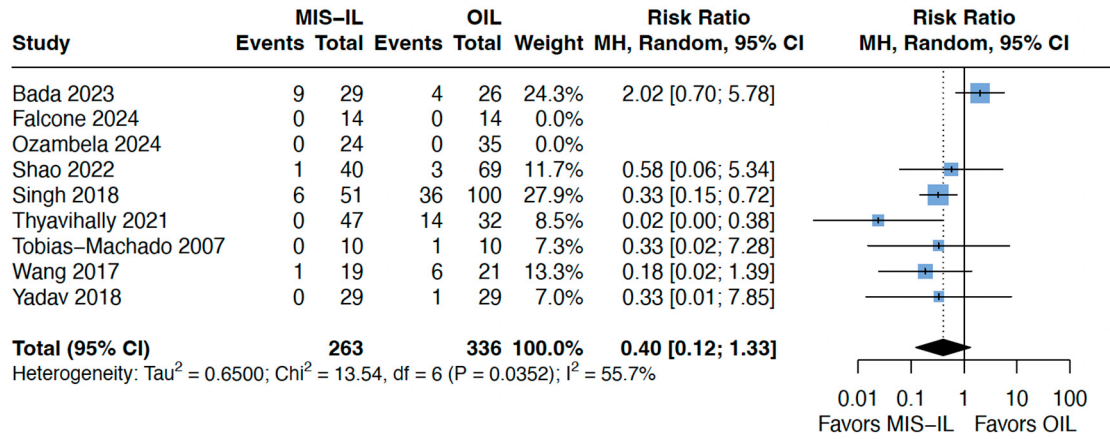


Figure S4. Forest plot comparing O-ILND versus MIS-ILND for skin/flap necrosis [1,3,7,9–14].

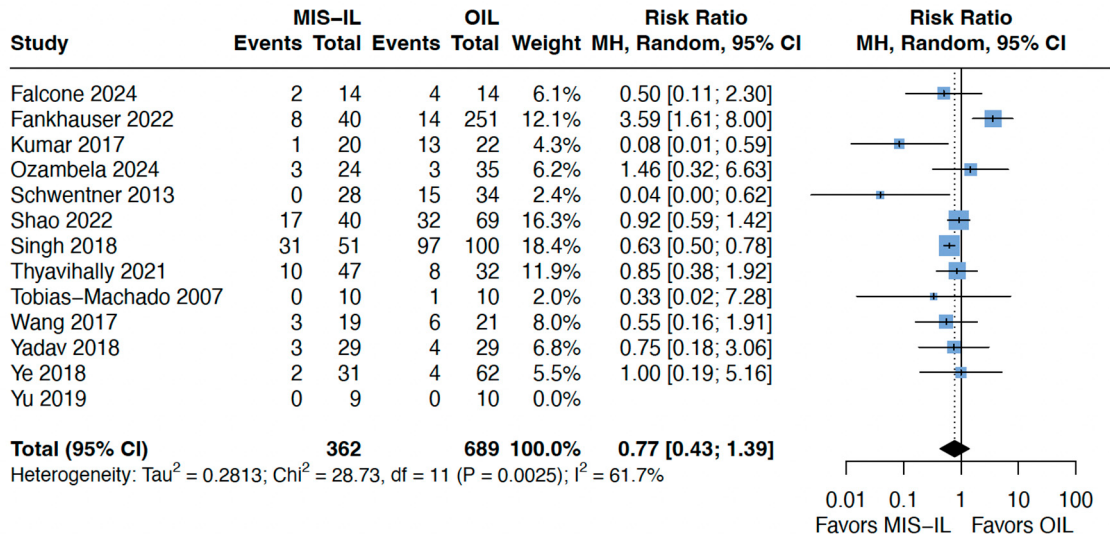


Figure S5. Forest plot comparing O-ILND versus MIS-ILND for lymphedema [3–5,7–16].

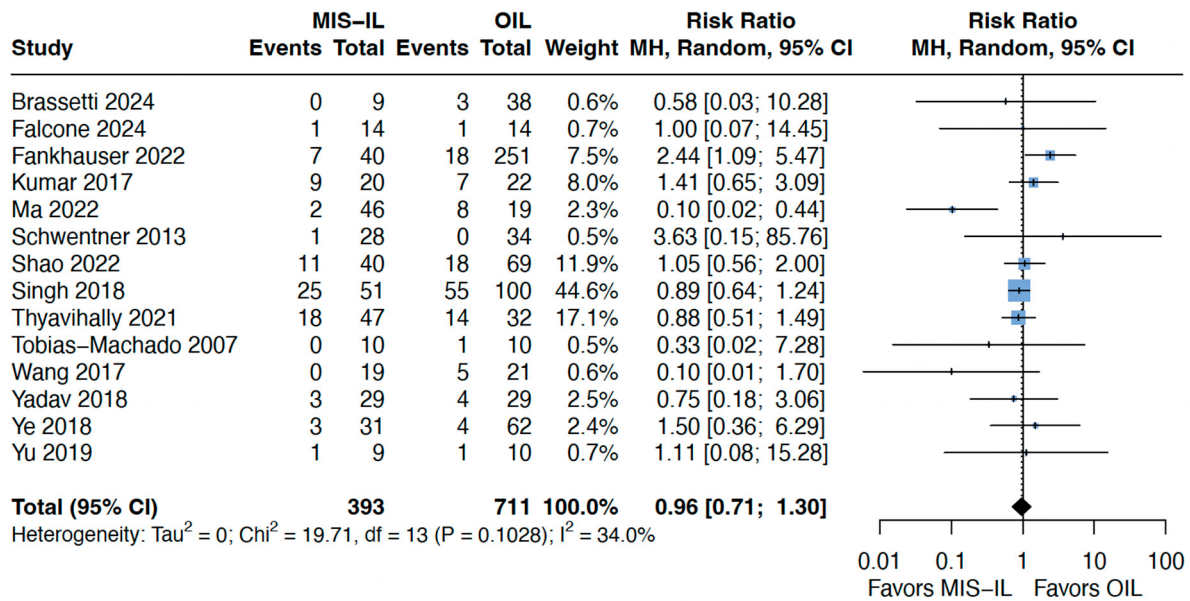


Figure S6. Forest plot comparing O-ILND versus MIS-ILND for lymphocele [2–6,8–16].

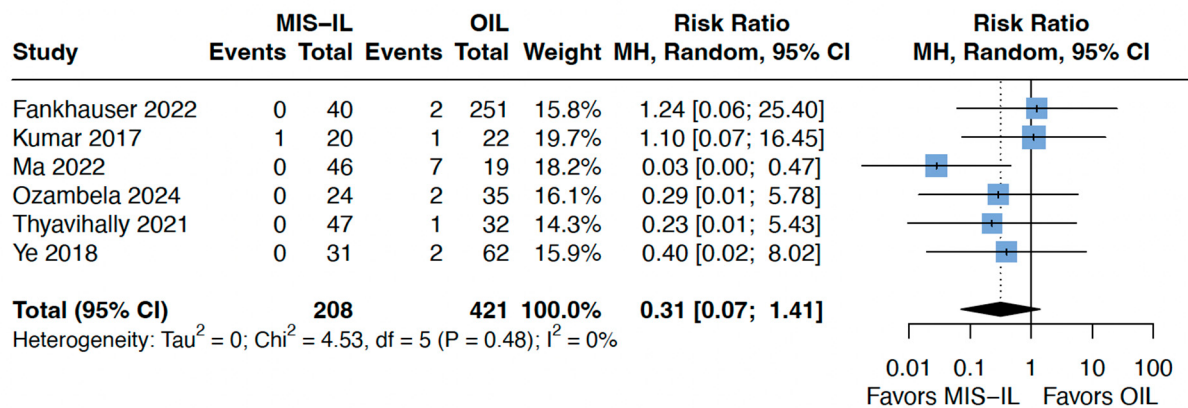


Figure S7. Forest plot comparing O-ILND versus MIS-ILND for deep vein thrombosis [4–7,11,15].

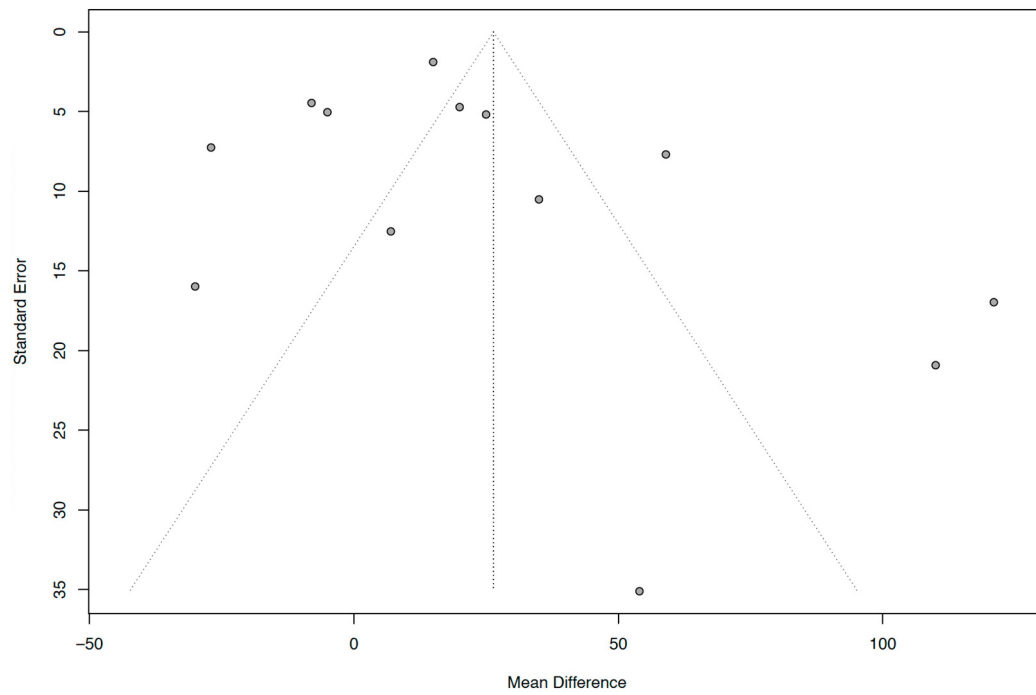


Figure S8. Funnel plot comparing operative time (min).

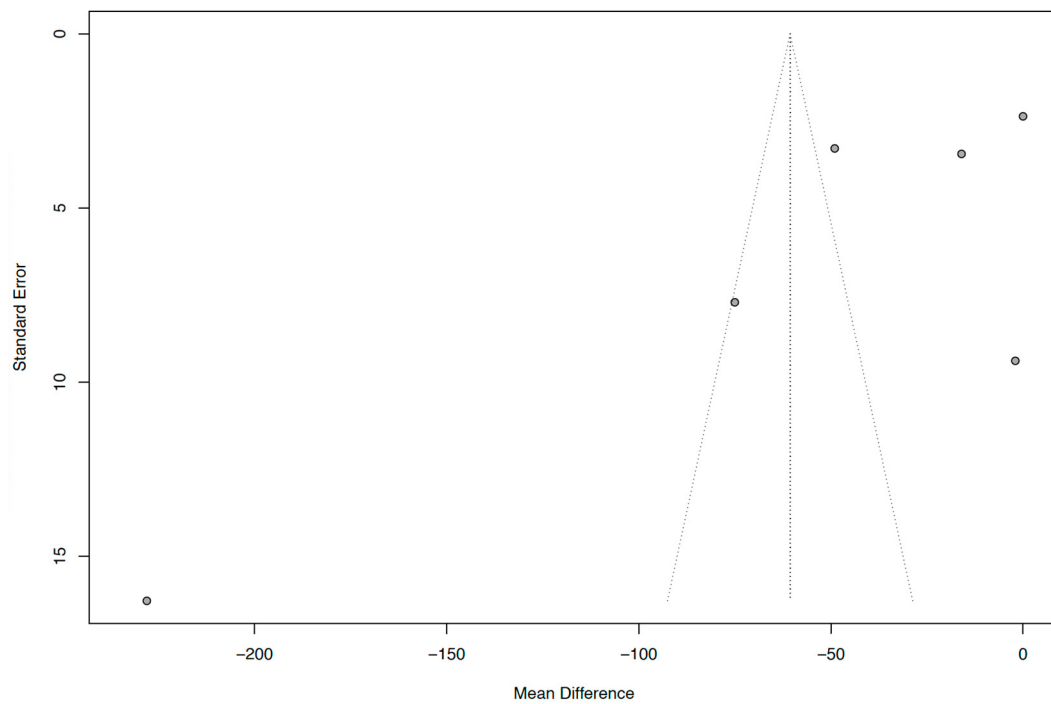


Figure S9. Funnel plot comparing estimated blood loss (mL).

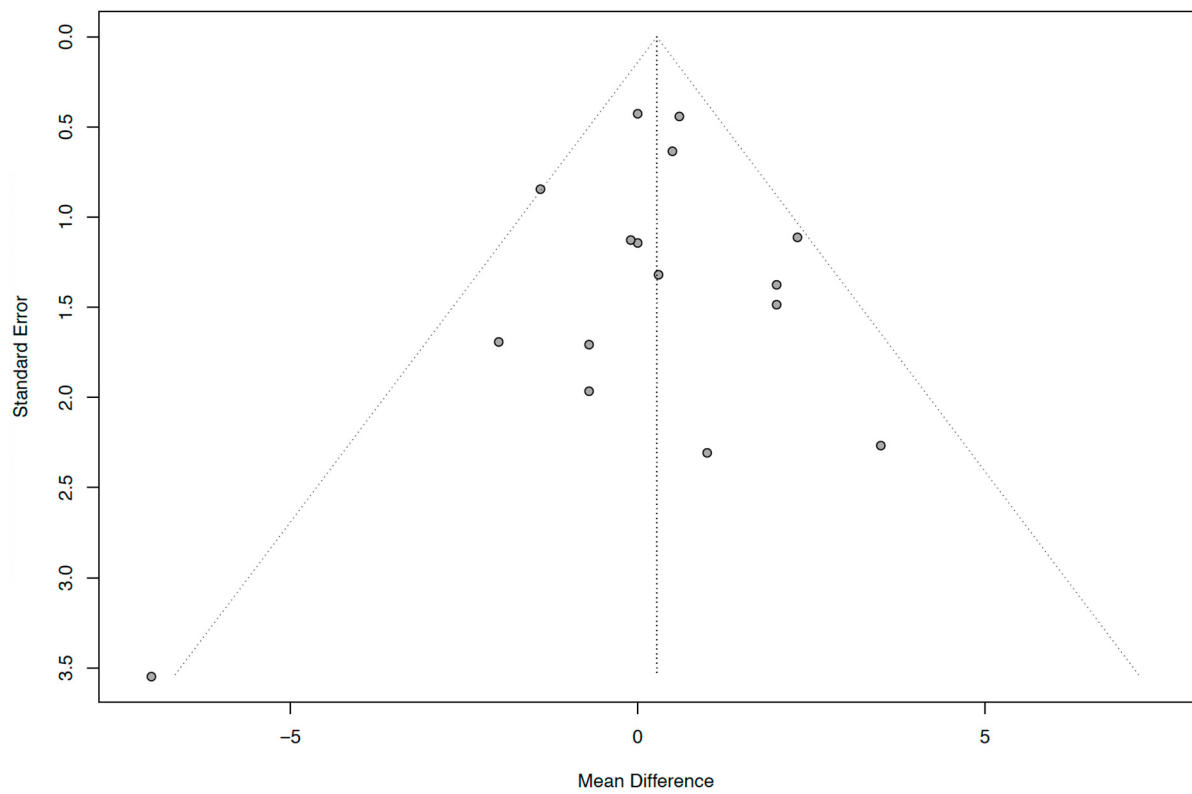


Figure S10. Funnel plot comparing lymph node yield.

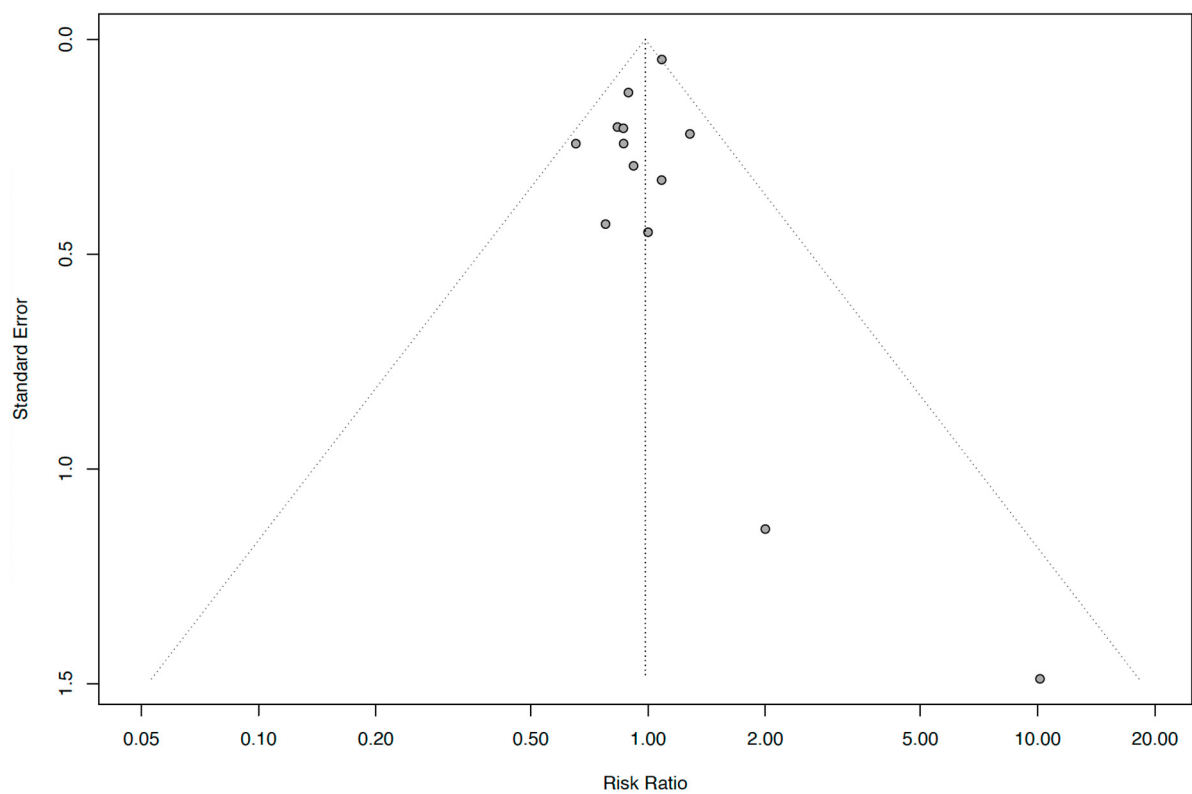


Figure S11. Funnel plot comparing groins with positive inguinal lymph nodes.

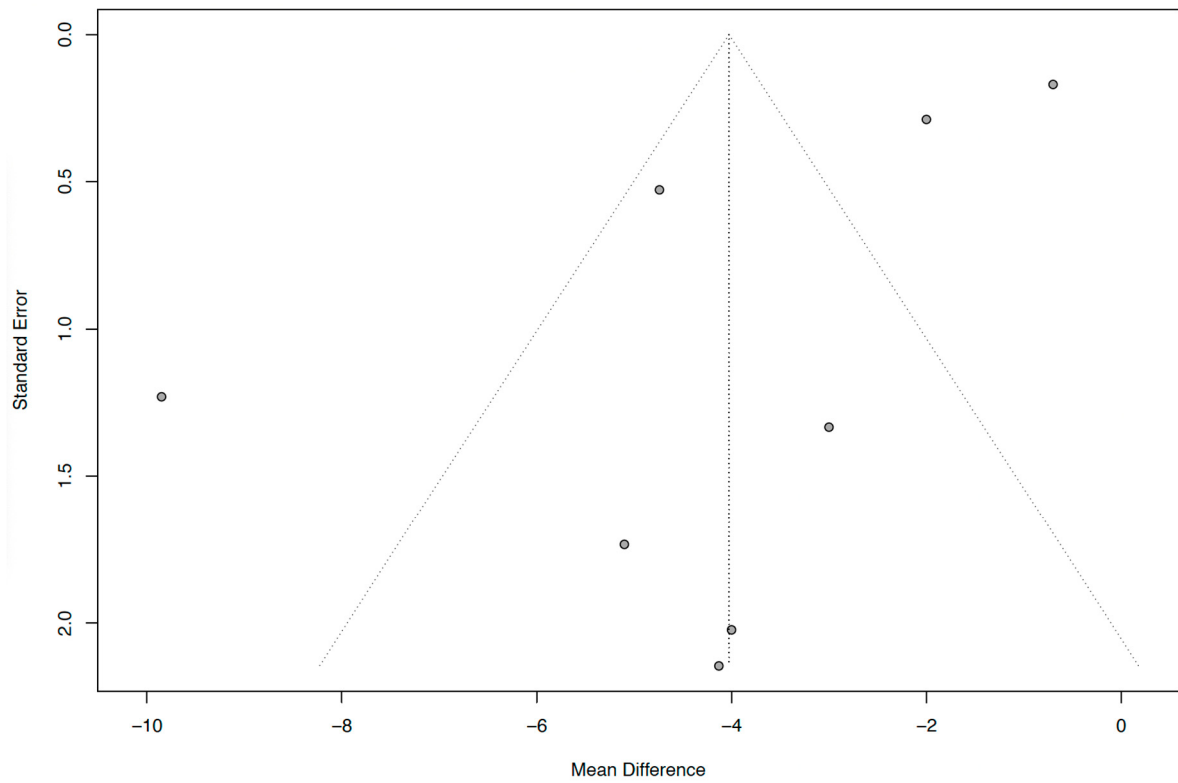


Figure S12. Funnel plot comparing length of stay (days).

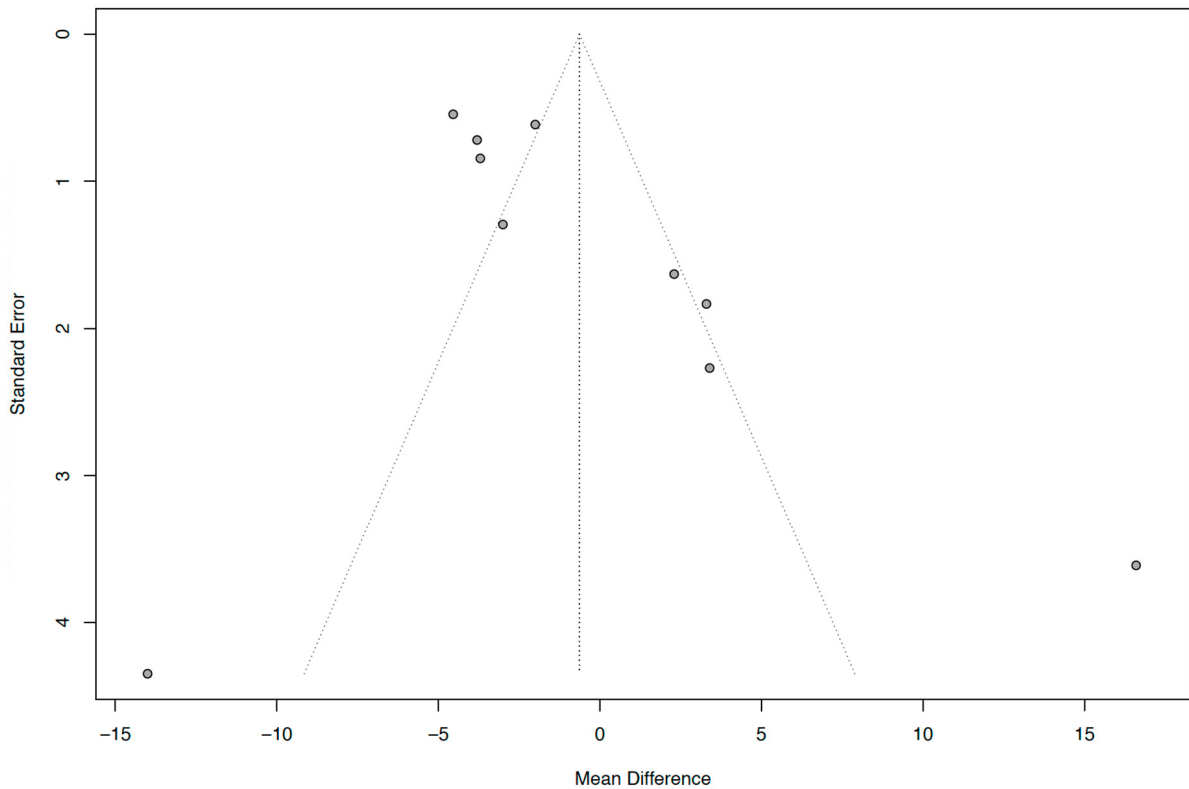


Figure S13. Funnel plot comparing minor complications (Clavien-Dindo Grade 1-2).

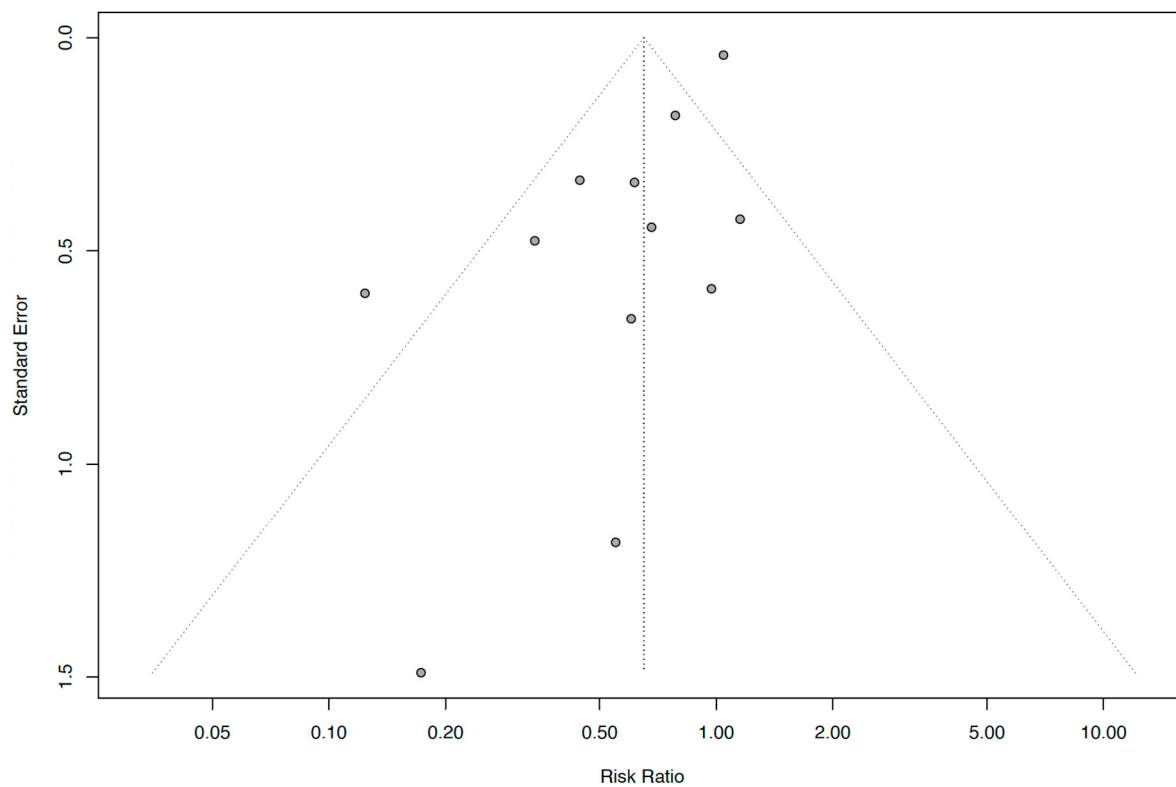


Figure S14. Funnel plot comparing major complications (Clavien-Dindo Grade >2).

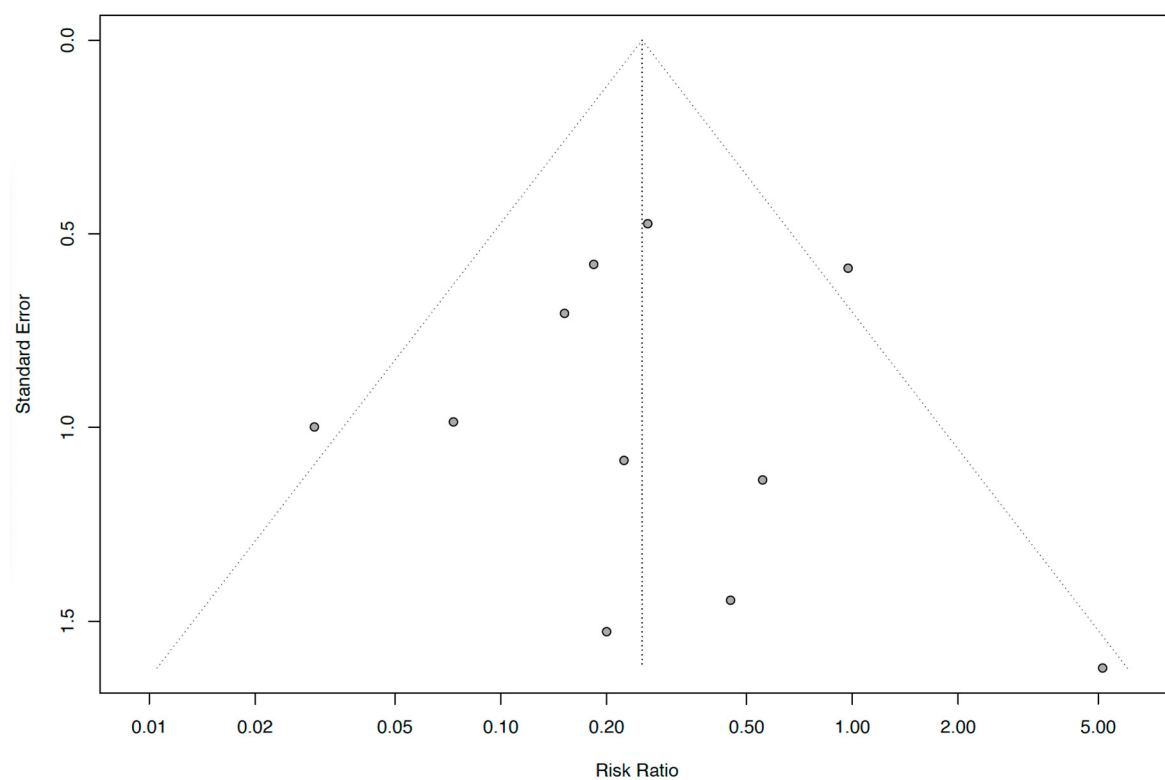


Figure S15. Funnel plot wound infection.

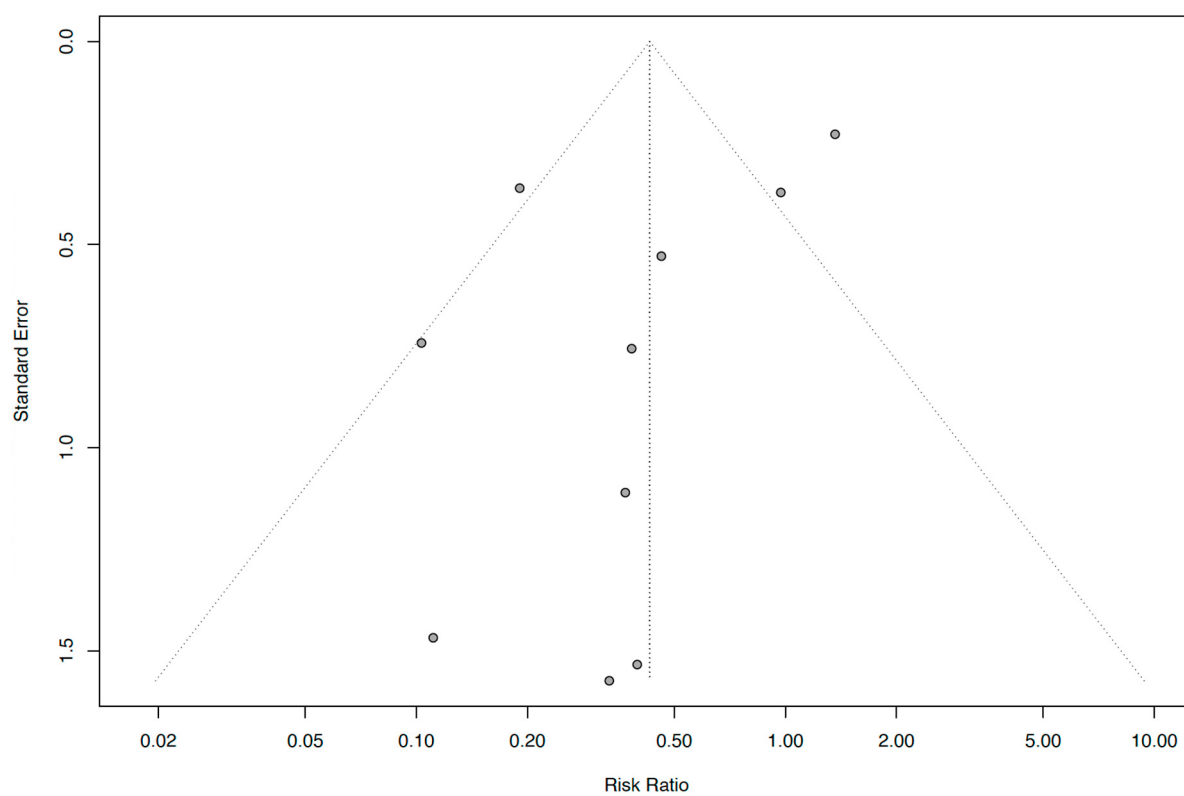


Figure S16. Funnel plot comparing overall recurrence.

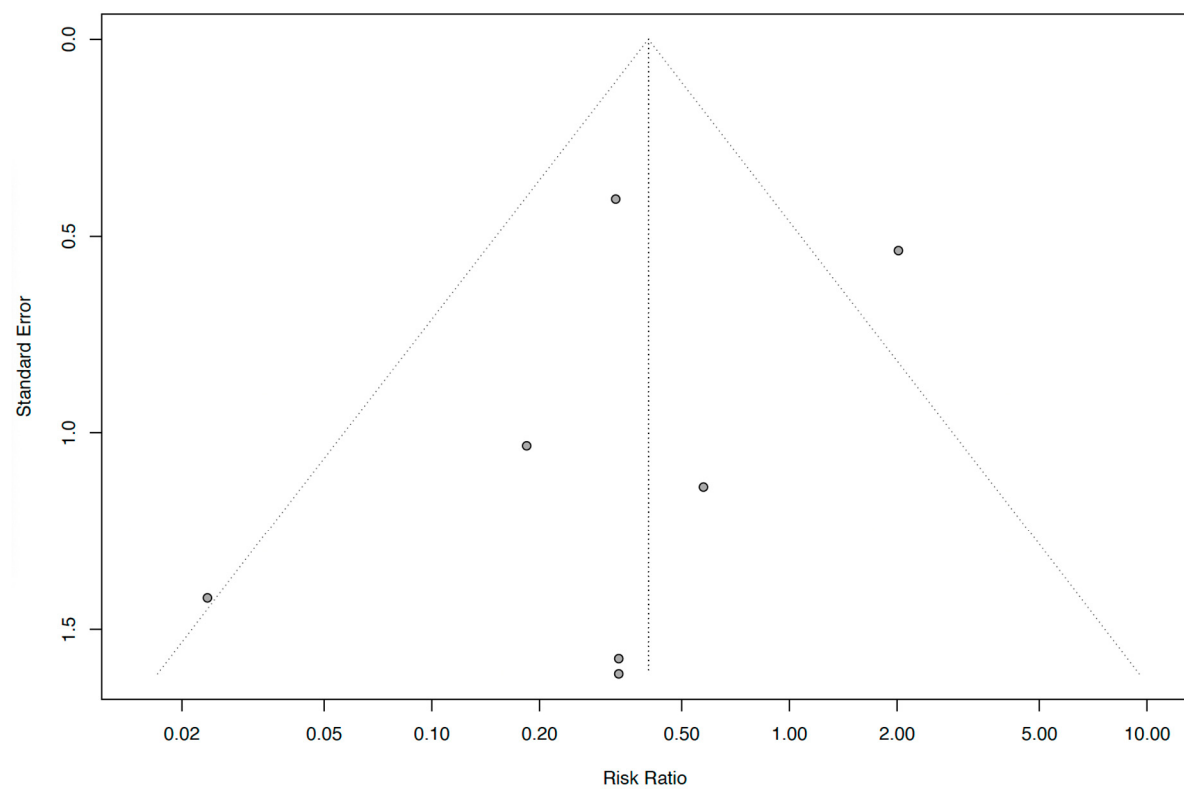


Figure S17. Funnel plot comparing local groin recurrence.

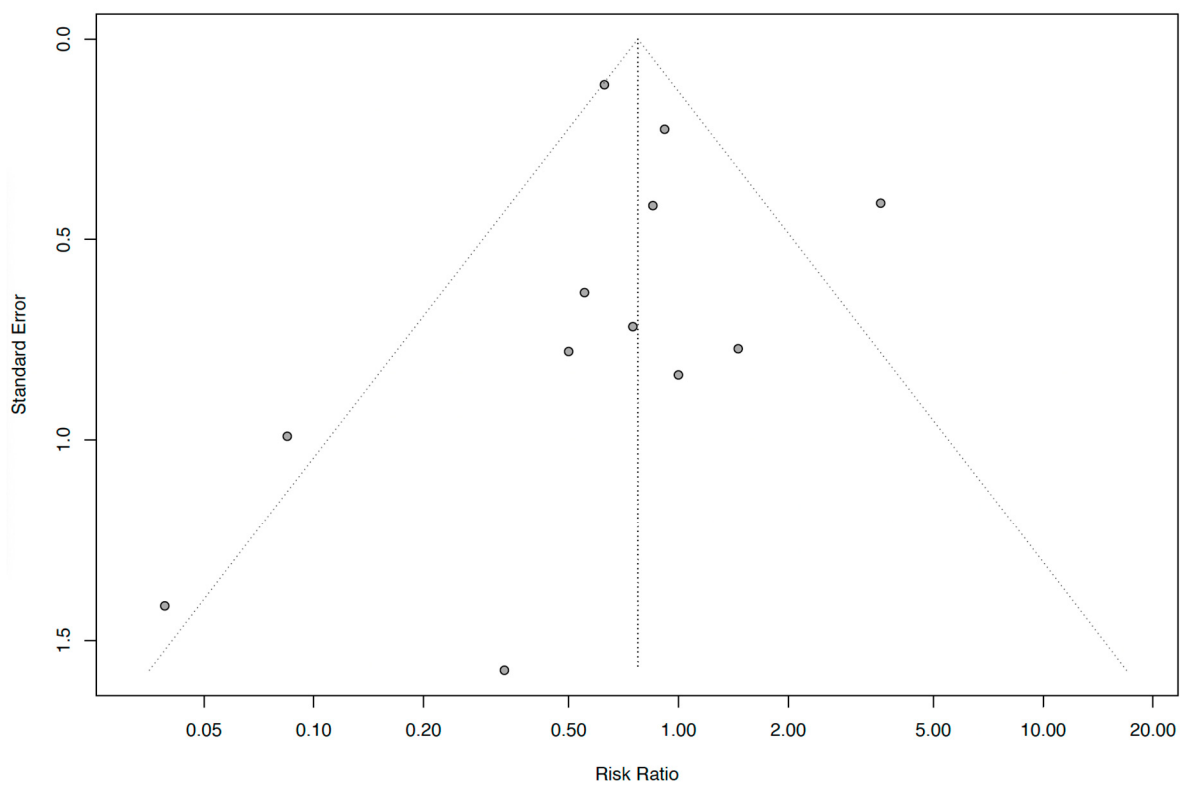


Figure S18. Funnel plot comparing time to drain removal (days).

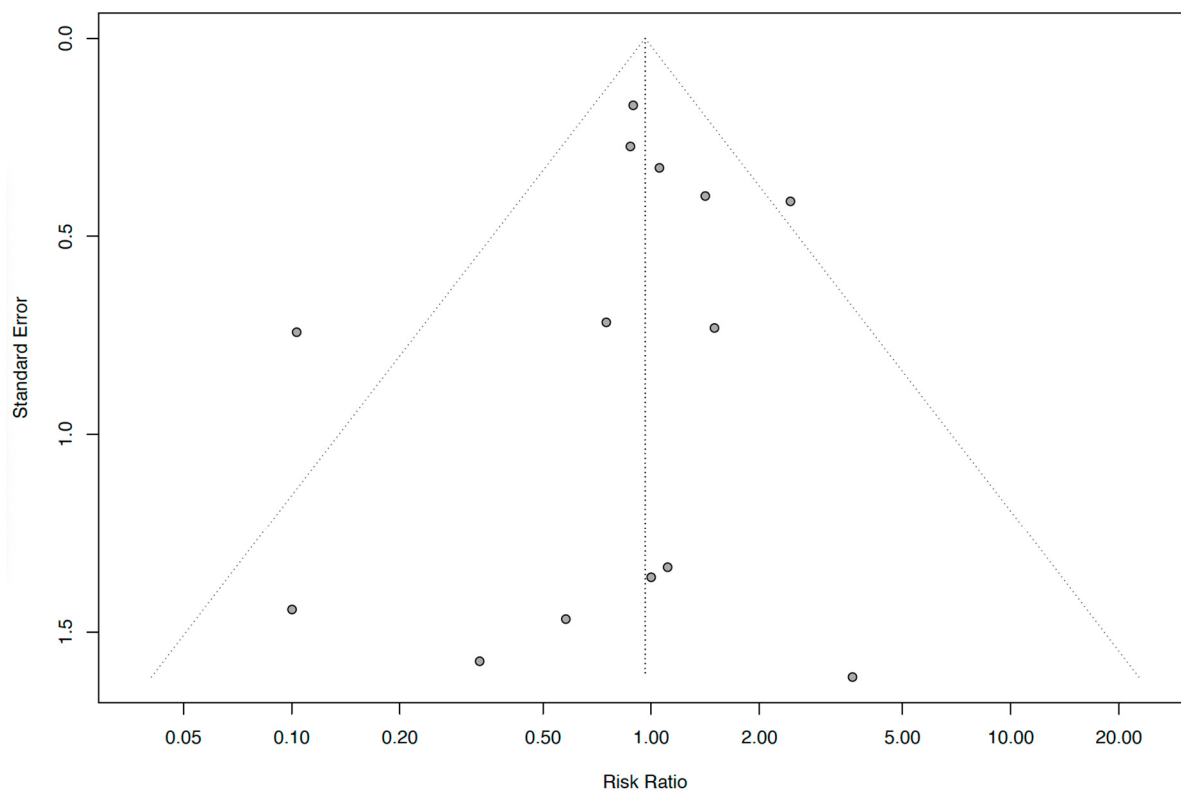


Figure S19. Funnel plot comparing skin/flap necrosis.

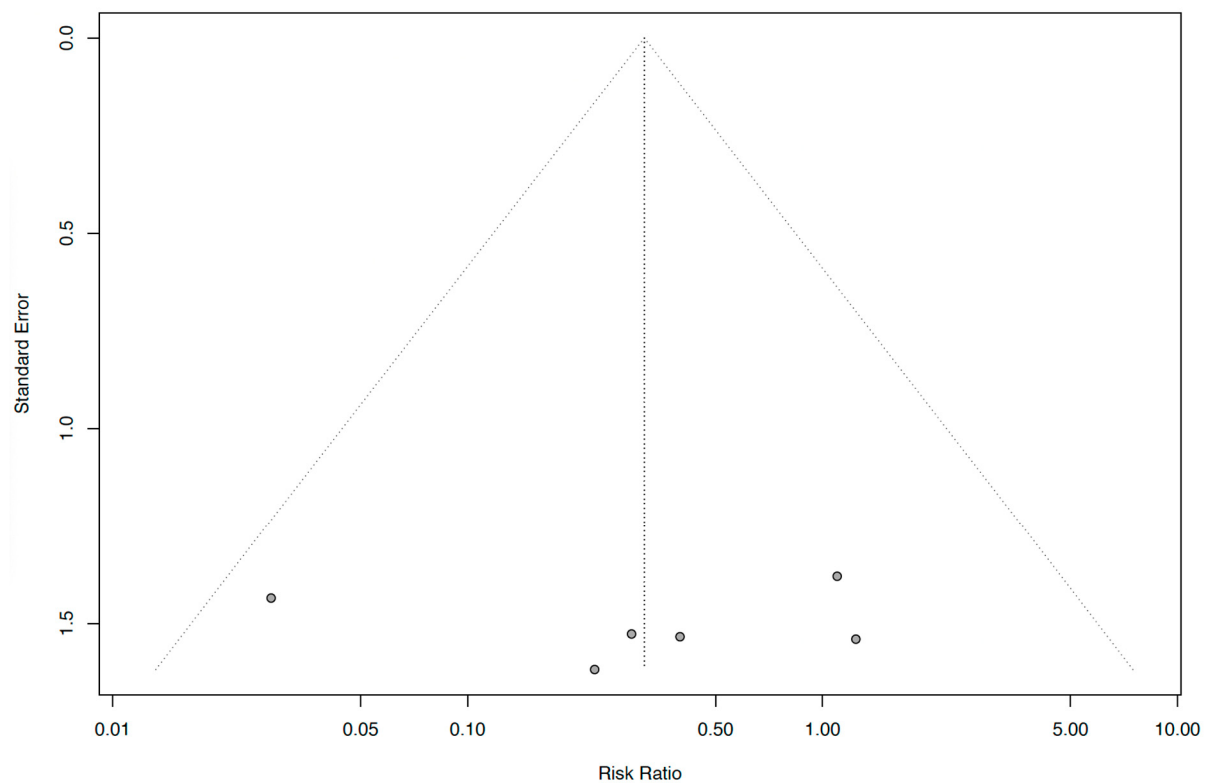


Figure S20. Funnel plot comparing lymphedema.

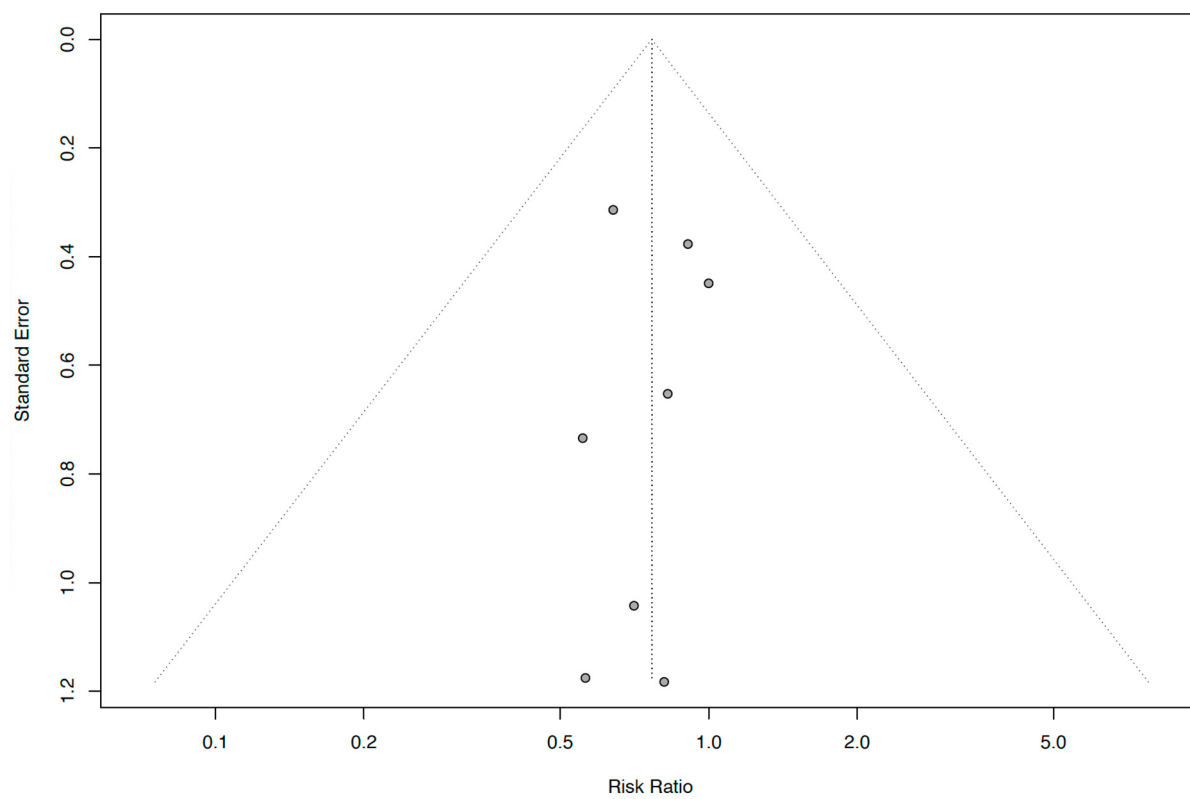


Figure S21. Funnel plot comparing lymphocele.

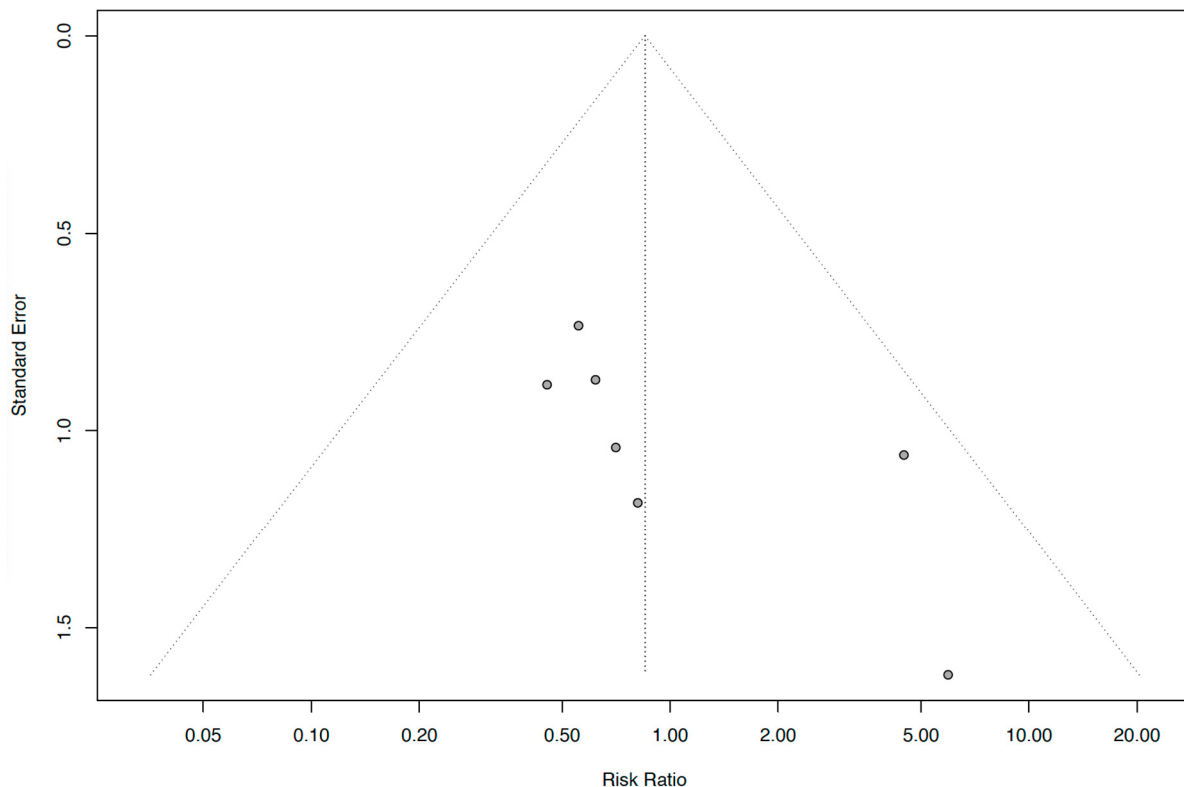


Figure S22. Funnel plot comparing deep vein thrombosis.

Reference

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